

HEDGEROW PLANTING

(Feet)
Code 422

Natural Resources Conservation Service
Conservation Practice Standard

I. Definition

Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.

II. Purpose

Providing at least one of the following conservation functions:

- Food, cover and corridors for terrestrial wildlife
- Living fences
- Boundary delineation
- Contour guidelines
- Screens and barriers to noise and dust
- Improvement of landscape appearance

III. Conditions Where Practice Applies

This practice applies wherever it will accomplish at least one of the purposes stated above.

IV. Federal, State, and Local Laws

Users of this standard shall comply with applicable federal, state and local laws, rules, regulations or permit requirements governing **hedgerow plantings**. This standard does not contain the text of federal, state, or local laws.

V. Criteria

The following criteria is applicable to all purposes:

A. General

1. Hedgerows shall be established using woody plants, or perennial bunch grasses producing erect stems attaining average heights of at least 3 feet and persisting well over winter.
2. Plants selected must be suited and adapted to the soils, climate and conservation purpose.

3. No plant listed by the state as a noxious weed shall be established in a hedgerow.
4. The practice shall be protected from livestock grazing and trampling to the extent necessary to ensure that it will perform the intended purpose(s).
5. Competing vegetation shall be controlled until the hedgerow becomes established. Control shall continue beyond the establishment period, if necessary.

B. Additional Criteria for Wildlife Food, Cover, and Corridors

1. Establish at least two species of native vegetation.
2. Selected plants shall provide cover and/or food to support the landowner's wildlife objectives.

C. Additional Criteria for Living Fences

1. Selected plants shall attain a size adequate to create a barrier to contain livestock or humans, as needed.
2. If the purpose is to contain livestock, selected plants shall not be poisonous or hazardous to the animals.

D. Additional Criteria for Screens, Noise and Dust Barriers

1. Screening hedgerows provide privacy, hide unsightly areas from view or reduce noise.
2. Hedgerows shall be located where they most completely obstruct a line of sight, offensive sound, or dust.
3. Selected plants shall attain a height and fullness sufficient to break the line of sight, or baffle sound and dust.

E. Additional Criteria for Improvement of Landscape Appearance

1. The hedgerow design shall meet the aesthetic objectives of the landowner.
2. Plants shall be selected based upon the landowner's preferences for color, texture, and growth habit.

VI. Considerations

Additional recommendations relating to design that may enhance the use of, or avoid problems with, this practice but are not required to ensure its basic conservation functions are as follows.

A. General

1. Hedgerows can be planned in combination with other practices to develop complete conservation systems that enhance landscape aesthetics, reduce soil erosion, improve sediment trapping, improve water quality, and provide wildlife habitat.
2. Hedgerows following land contours create meandering lines on the landscape, produce a natural appearance, and increase the availability of "edge" wildlife habitats.
3. Hedgerows containing a mixture of native shrubs and small trees provide greatest environmental benefits.
4. Use of bareroot and containerized seedlings will accelerate hedgerow development.
5. Consider the amount of shading a hedgerow will provide at maturity. Shading may impact growth of adjacent plants, microclimate, and aesthetics.
6. Limiting renovation events to one-third of a hedgerow's length or width will prevent sudden elimination of the practice's wildlife habitat function.
7. Consider avoiding the use of plants that spread by root suckers as hedgerow may expand beyond the desired treatment area.

B. Wildlife Food, Cover, and Corridors

1. Hedgerows can provide travel lanes, or corridors that allow wildlife to move safely across a landscape.
2. Generally, wider corridors accommodate more wildlife use.
3. Linking fragmented habitats may increase wildlife use of an area.
4. In grassland ecosystems, hedgerows may adversely affect area-sensitive nesting birds by fragmenting habitat patches and increasing the risk of predation.
5. Hedgerows can complement the availability of naturally occurring wildlife foods.
6. Hedgerows can provide wildlife with cover for feeding, loafing, nesting, and caring for young.
7. Dense or thorny shrub thickets provide songbirds with important nesting sites and a refuge to escape predators.
8. Establishment of evergreen plants provides year-round concealment and thermal cover for wildlife.
9. Establishment of herbaceous vegetation along the edges of a hedgerow can further enhance the habitat functions of a hedgerow.
10. Installation of artificial nest boxes with predator guards can encourage cavity-nesting birds and small mammals to utilize a hedgerow.

C. Living Fences

Thorny shrubs and trees can improve a living fence's barrier effect.

D. Screens and Noise Barriers

1. From eye-level, hedgerows reduce the line-of-sight across open areas, concealing objects behind them from view.
2. Consider the design from viewpoints on both sides of the screen.
3. Locate noise barriers as close to the source of noise as possible.

4. A combination of shrubs and/or trees can create more effective screens than single species plantings.
5. Evergreens provide foliage that can maintain a screen's year-round effectiveness.

E. Improving Landscape Appearance

1. Consider plants' seasonal display of colors on bark, twigs, foliage, flowers, and fruit.
2. Consider plants' growth habits (outline, height and width).

F. Water Quality and Quantity

Water quality benefits may arise from:

- Arresting sediment movement and trapping sediment-attached substances.
- Infiltration and assimilation of plant nutrients.
- Water cooling effects resulting from increased shade on small watercourses.

G. Incidental Trapping of Snow or Sand

1. Although not a primary purpose, hedgerows may incidentally trap wind blown snow or sand.
2. Consider installing hedgerows on alignments that prevent trapping and accumulation of snow and sand on public roads.
3. Refer to the NRCS Field Office Technical Guide (FOTG), Section IV Standard 380, Windbreak/Shelterbelt Establishment, for criteria when snow or sand trapping is a primary conservation purpose.

H. Hedgerow Establishment

1. Evergreen Trees
 - White Spruce - *Picea glauca*
 - Northern White Cedar - *Thuja occidentalis*
 - Eastern Redcedar - *Juniperus virginiana*
 - Red Pine - *Pinus resinosa*
 - White Pine - *Pinus strobus*

Space trees 8 to 10 feet apart in the row and 10 to 12 feet from other rows.

3. Small Trees

- Chokecherry - *Prunus virginiana*
- Pin Cherry - *Prunus pensylvanica*
- Hawthorn - *Crataegus sp.*
- American Mountain Ash - *Sorbus americana*

Small trees should be spaced 6 to 8 feet apart in the row and 8 to 10 feet from other rows.

2. Shrubs

- American Highbush Cranberry - *Viburnum trilobum*
- Gray Dogwood - *Cornus racemosa*
- Silky Dogwood - *Cornus amomum*
- Red-osier Dogwood - *Cornus sericea*
- Common Elderberry - *Sambucus canadensis*
- American Hazelnut - *Corylus americana*
- Ninebark - *Physocarpus opulifolius*
- Wild Plum - *Prunus americana*
- Nannyberry - *Viburnum lentago*
- Arrowood - *Viburnum dentatum*

Shrubs should be spaced 4 to 6 feet apart in the row and 6 to 8 feet from other rows.

VII. Plans and Specifications

Plans and specifications for this practice shall be prepared for each site. Plans and specifications shall be recorded using approved specification sheets, job sheets, or narrative documentation in the conservation plan, or other acceptable documentation.

VIII. Operation and Maintenance

An Operation and Maintenance Plan shall be developed with the landowner or operator that is consistent with the purposes of this practice, intended life of the components, and criteria for design.

The plan shall include but is not limited to:

- A. Supplemental planting may be required when survival is too low to produce a continuous hedgerow.
- B. Vegetation shall be protected from unwanted fire and grazing throughout its life span.
- C. Pests shall be monitored and controlled.
- D. Periodic applications of nutrients may be needed to maintain plant vigor.
- E. Renovation activities shall be scheduled to prevent disturbance during the wildlife nesting season.

IX. References

USDA, Natural Resources Conservation Service,
National Biology Handbook, Part 614.4,
“Conservation Corridor Planning at the Landscape
Level,” August 1999.

Wildlife and Your Land Series, Wisconsin
Department of Natural Resources.

Woody Cover for Wildlife, Wisconsin Department of
Natural Resources.

USDA, NRCS Wisconsin Field Office Technical
Guide (FOTG), Section IV, Practice Standards and
Specifications.